

2000

## Field Trip Guide (for the Nebraska well Drillers Association) Eastern Nebraska Geology

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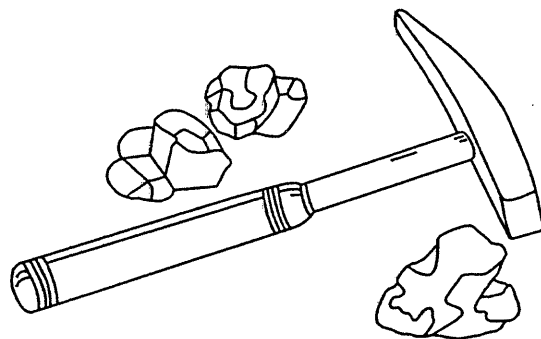
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# **FIELD TRIP GUIDE**

(for the Nebraska Well Drillers Association)

## ***EASTERN NEBRASKA GEOLOGY***

**Scott Summerside, Duane Eversoll,  
Mark Kuzila and Matt Joeckel**



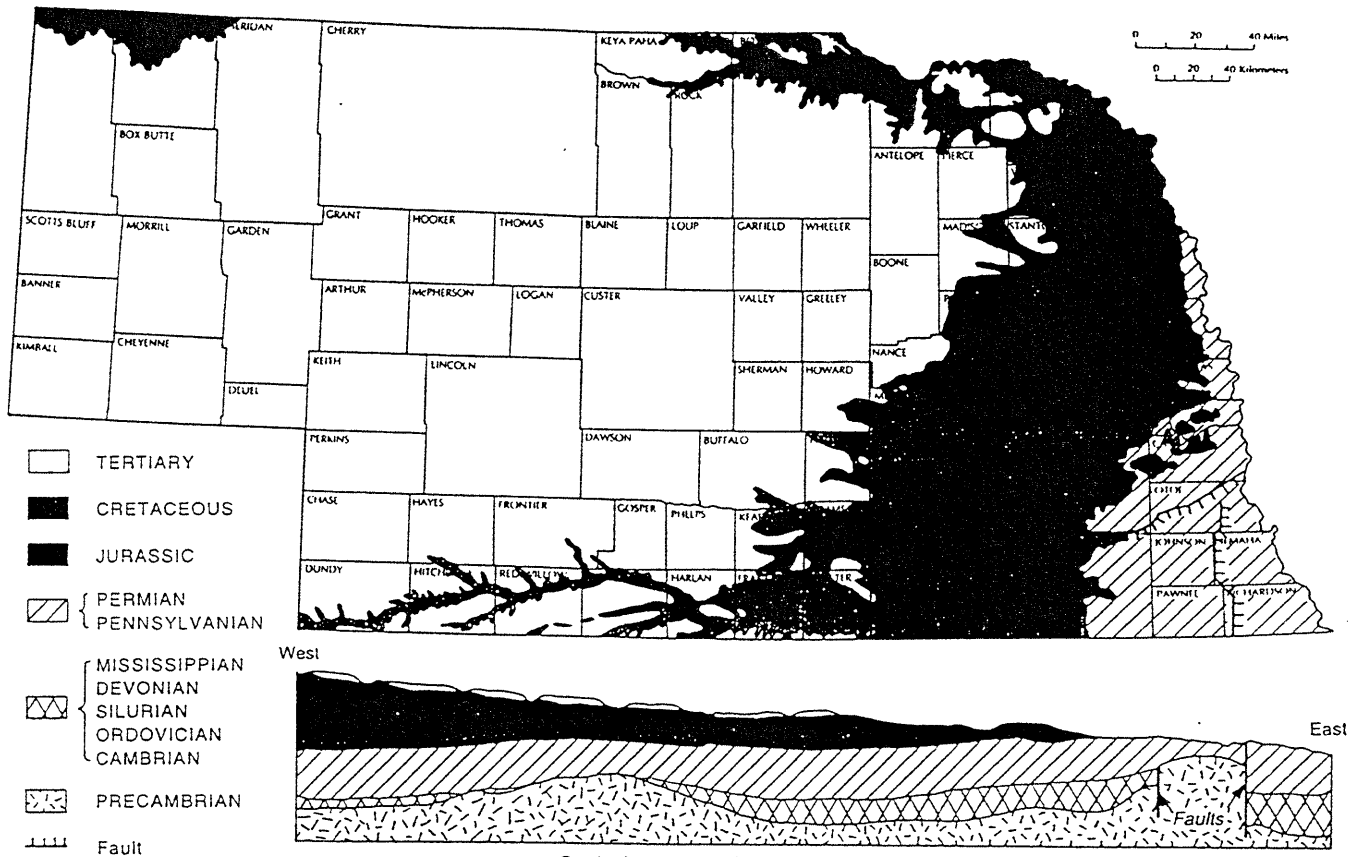
**NEBRASKA GEOLOGICAL SURVEY**

**Conservation and Survey Division  
Institute of Agriculture and Natural Resources  
University of Nebraska-Lincoln**



September 14, 2000

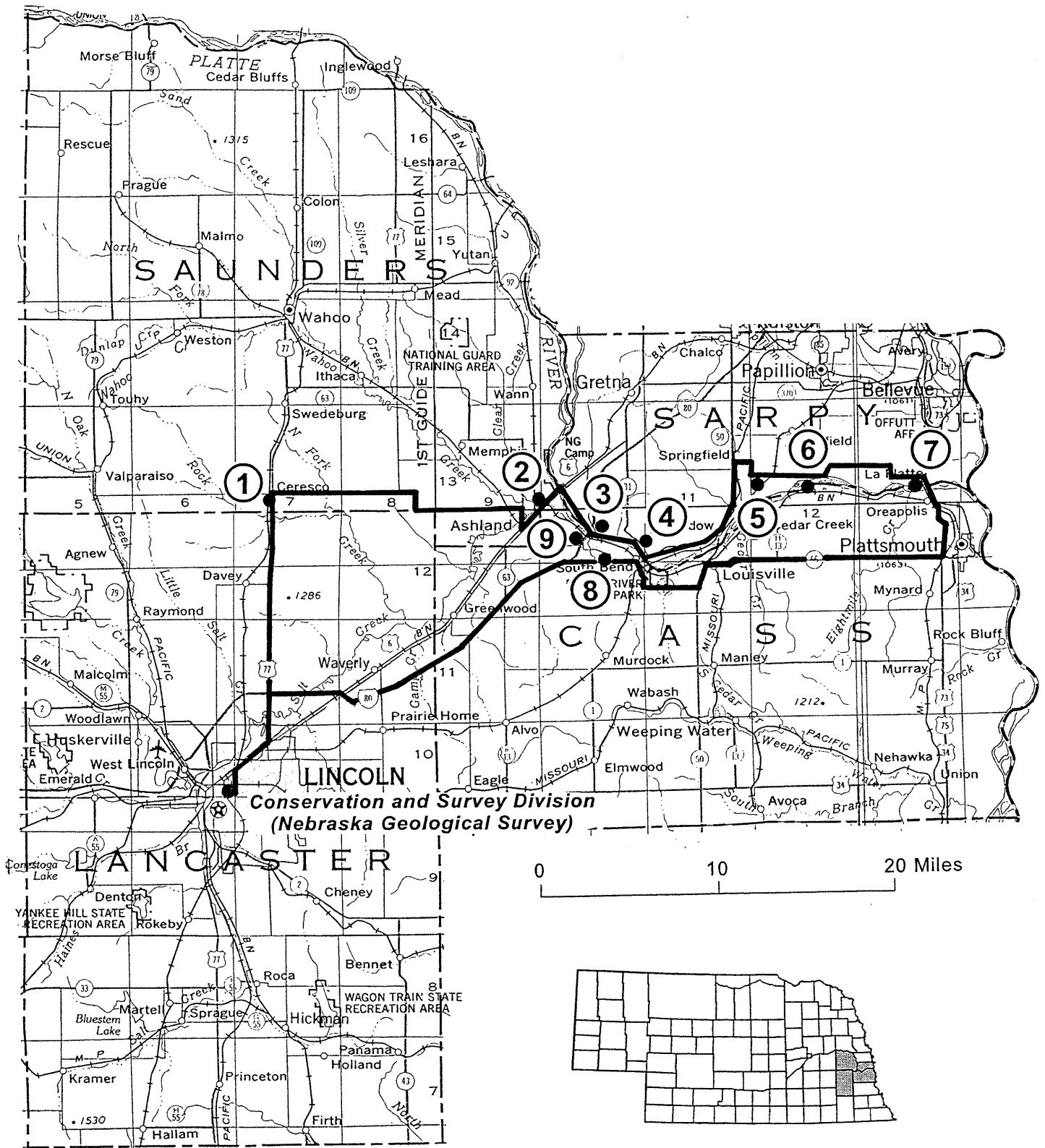




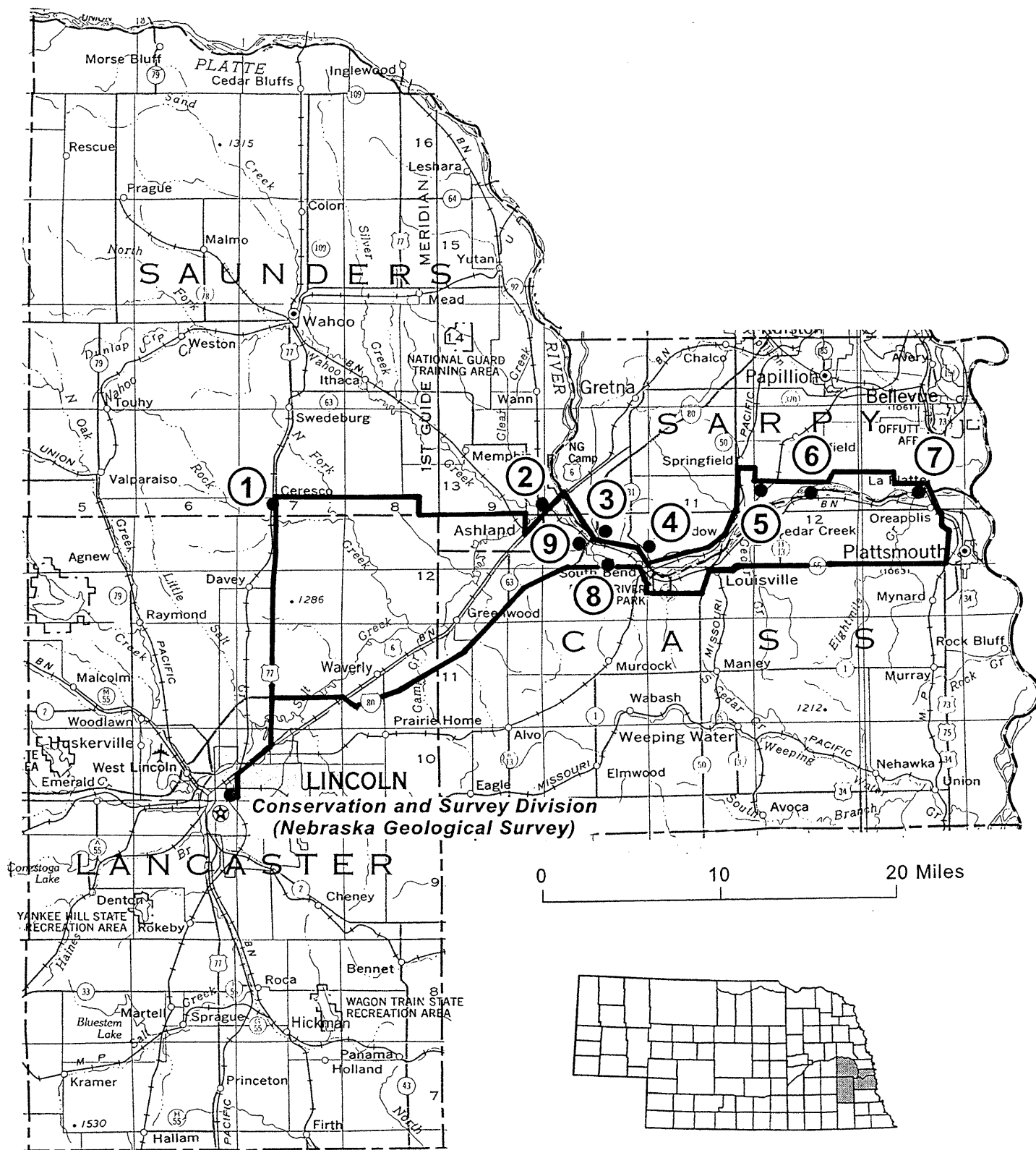
Geologic cross section along southern Nebraska border

AGE	GEOLOGIC TIME UNITS		ROCK TYPES	MINERAL RESOURCES AND PRODUCTS
1.6	CENOZOIC (recent life)	QUATERNARY (Recent and Pleistocene)	Glacial till, silt, clay, sand, gravel, volcanic ash.	Agricultural soil, water, sand and gravel, volcanic ash.
		TERTIARY	Sandstone, siltstone, clay, gravel, marl, volcanic ash.	Agricultural soil, water, sand and gravel, volcanic ash, riprap and uranium.
66	MESOZOIC (middle life)	CRETACEOUS	Chalk, chalky shale, dark shale, varicolored clay, sandstone, conglomerate.	Water, oil and gas, cement, brick, agricultural lime, and other construction materials.
138		JURASSIC	Subsurface only. Sandstones and shales.	
205		TRIASSIC		
240	PALEOZOIC (ancient life)	PERMIAN	Shale, limestone, dolomite, gypsum, anhydrite sandstone, siltstone, chert.	Water agricultural lime, oil road rock, riprap.
290		PENNSYLVANIAN	Limestone, shale, sandstone, coal.	Oil, cement, brick, concrete aggregate, lightweight aggregate, road rock, agriculture lime, riprap, water.
330		MISSISSIPPIAN	Subsurface only. Limestone, dolomite.	Oil, water.
360		DEVONIAN	Subsurface only. Dolomite, gray shale.	
410		SILURIAN	Subsurface only. Dolomite.	
435		ORDOVICIAN	Subsurface only. Dolomite, sandstone, shale.	
500		CAMBRIAN	Subsurface only. Dolomite, sandstone.	
570		CRYPTOZOIC (hidden life)	PRECAMBRIAN	
5000?				

Geologic bedrock map and geologic time chart of Nebraska.

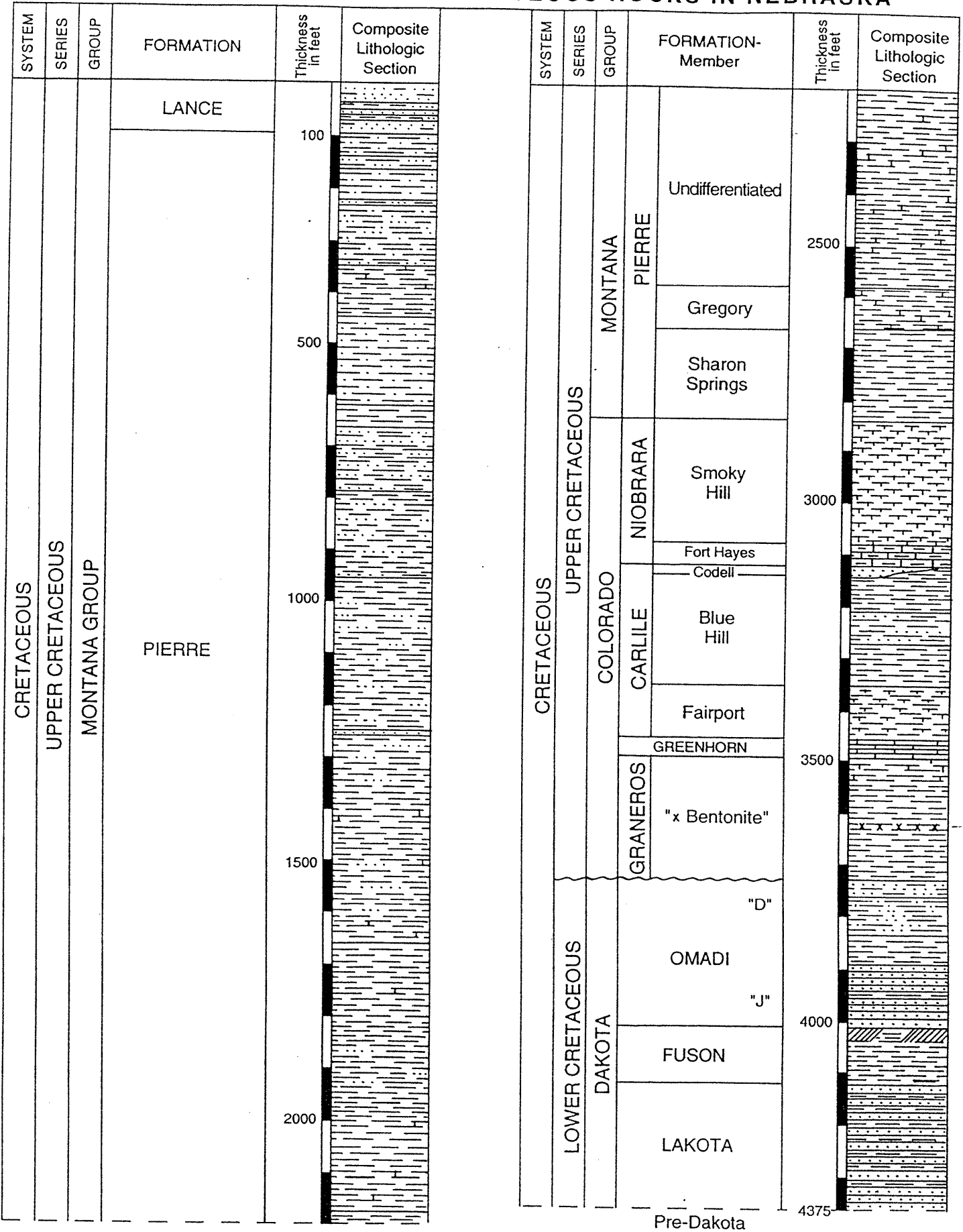


Index map showing location of stops



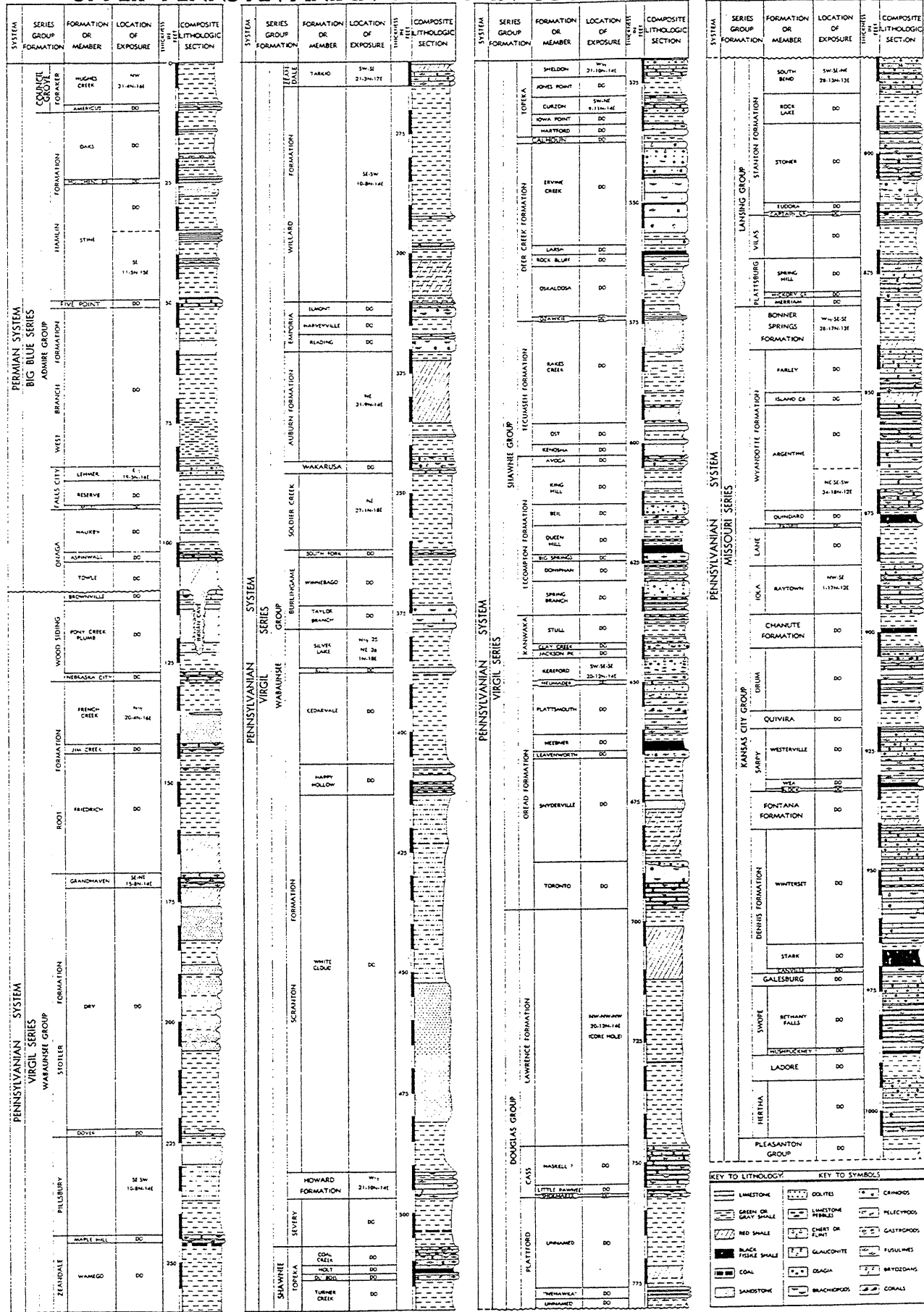
Index map showing location of stops

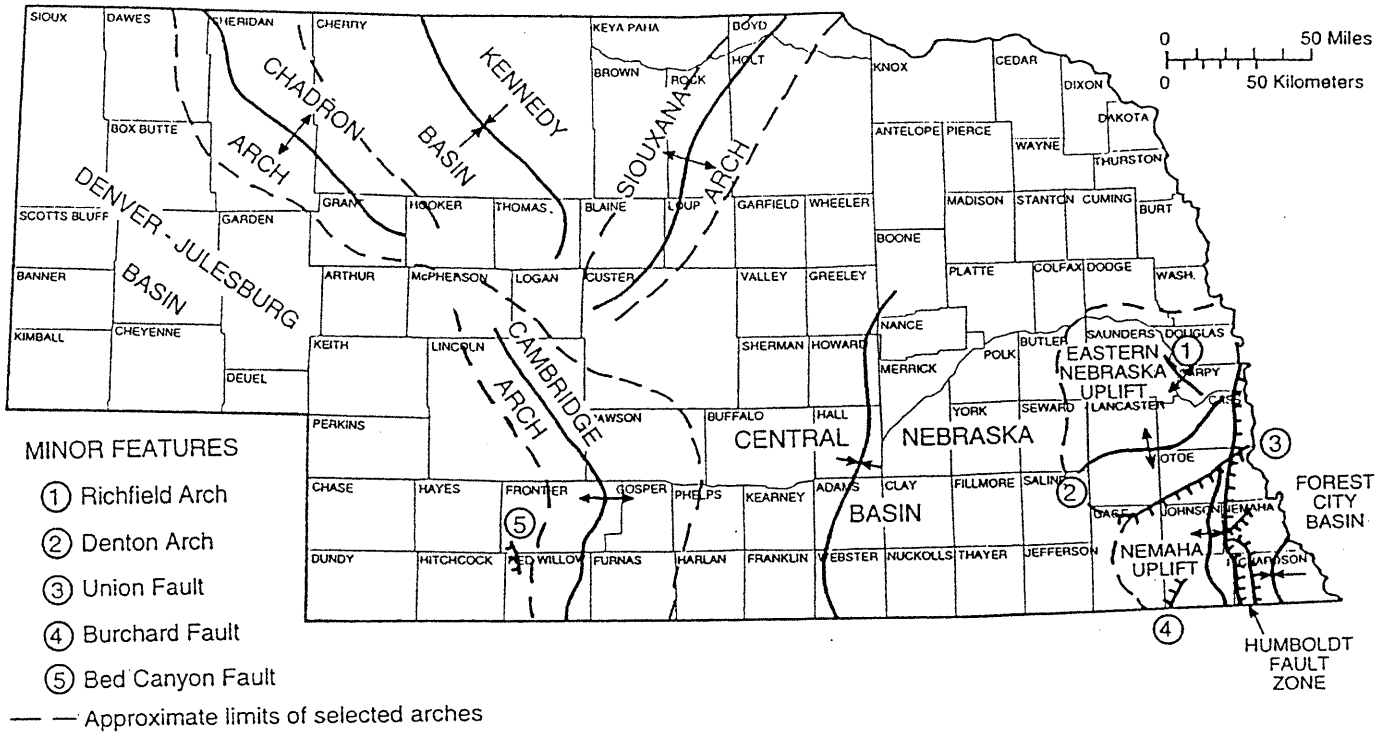
# COMPOSITE SECTION OF CRETACEOUS ROCKS IN NEBRASKA



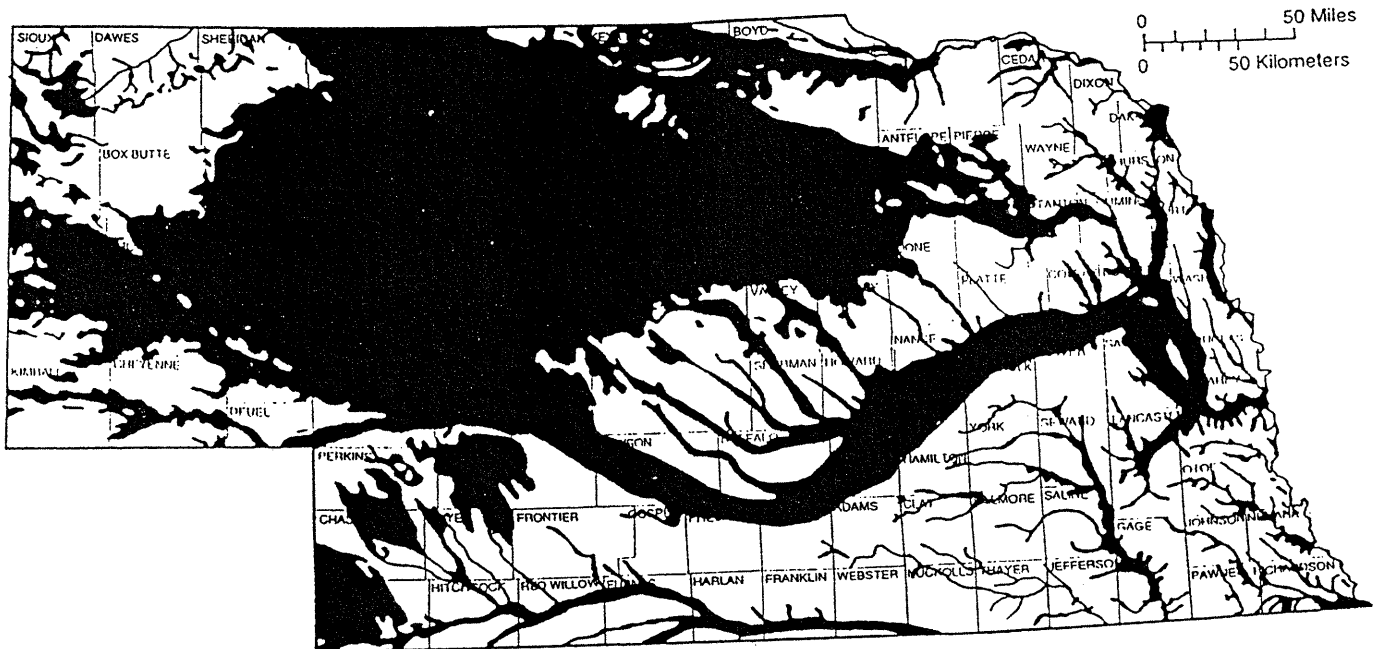
- Chalky limestone
- Limestone
- Shaly limestone
- Sand or sandstone
- Green or gray shale
- Red shale

# COMPOSITE SECTION OF OUTCROPPING LOWER PERMIAN AND UPPER PENNSYLVANIAN ROCKS IN SOUTHEASTERN NEBRASKA





Principal structural features in Nebraska.



Locations of sand and gravel deposits at or near the surface in Nebraska.